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| 6. AUTHOR(S) Ning Su, Jerald S. Bradshaw, Paul B. Savage, Guoping Xue, Krzysztof E. Krakowiak, and Reed M. Izatt | | | | |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Department of Chemistry and Biochemistry Brigham Young University Provo, UT 84602 | | | 8. PERFORMING ORGANIZATION REPORT NUMBER Technical Report No 14 | |
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| 13. ABSTRACT (Maximum 200 words) Ten new analogues of 5-chloro-8-hydroxyquinolin-7-ylmethyl- and -5-chloro-8-hydroxyquinolin-2-ylmethyl-substituted diaza-18-crown-6 ethers 1 and 2 , respectively (Figure 1) were synthesized <i>via</i> a one-pot or stepwise Mannich reaction, reductive amination, or by reacting diaza-18-crown-6 with 5,7-dichloro-2-iodomethyl-8-quinolinol in the presence of <i>N,N</i> -diisopropylethylamine (Schemes 1 and 2). The Mannich reaction of <i>N,N'</i> -bis(methoxymethyl)diaza-18-crown-6 with 4-chloro-2-(1 <i>H</i> -pyrazol-3-yl)phenol gave the -NCH ₂ N-linked bis(3-(5-chloro-2-hydroxy)pyrazol-1-ylmethyl)-substituted diazacrown ether (14) in a 98% yield. The reaction of bis- <i>N,N'</i> -methoxymethyldiaza-18-crown-6 with 2.2 equivalents of 10-hydroxybenzoquinoline gave only the monosubstituted diazacrown ether ligand (8). The yields of the new products are given in the schemes. | | | | |
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**Synthesis of Novel 8-Hydroxyquinoline-Containing Diaz-18-Crown-6 Ligands
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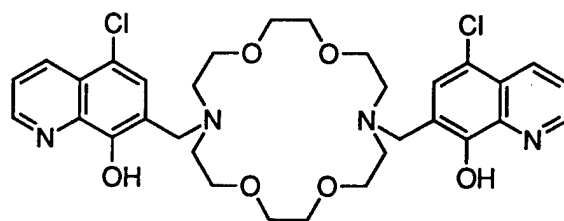
Ning Su, Jerald S. Bradshaw, Paul B. Savage, Guoping Xue,
Krzysztof E. Krakowiak, and Reed M. Izatt

Department of Chemistry and Biochemistry,
Brigham Young University, Provo, UT 84602

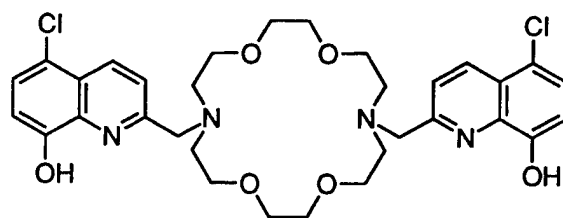
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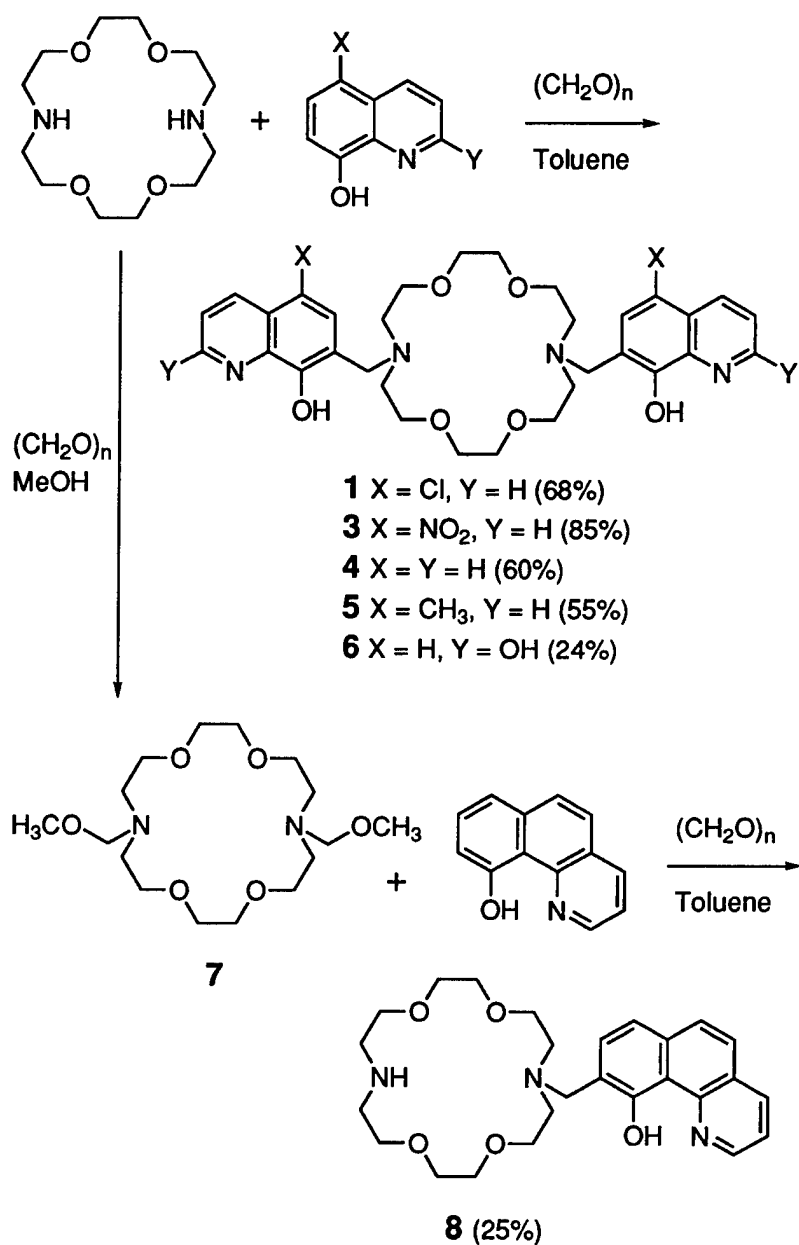


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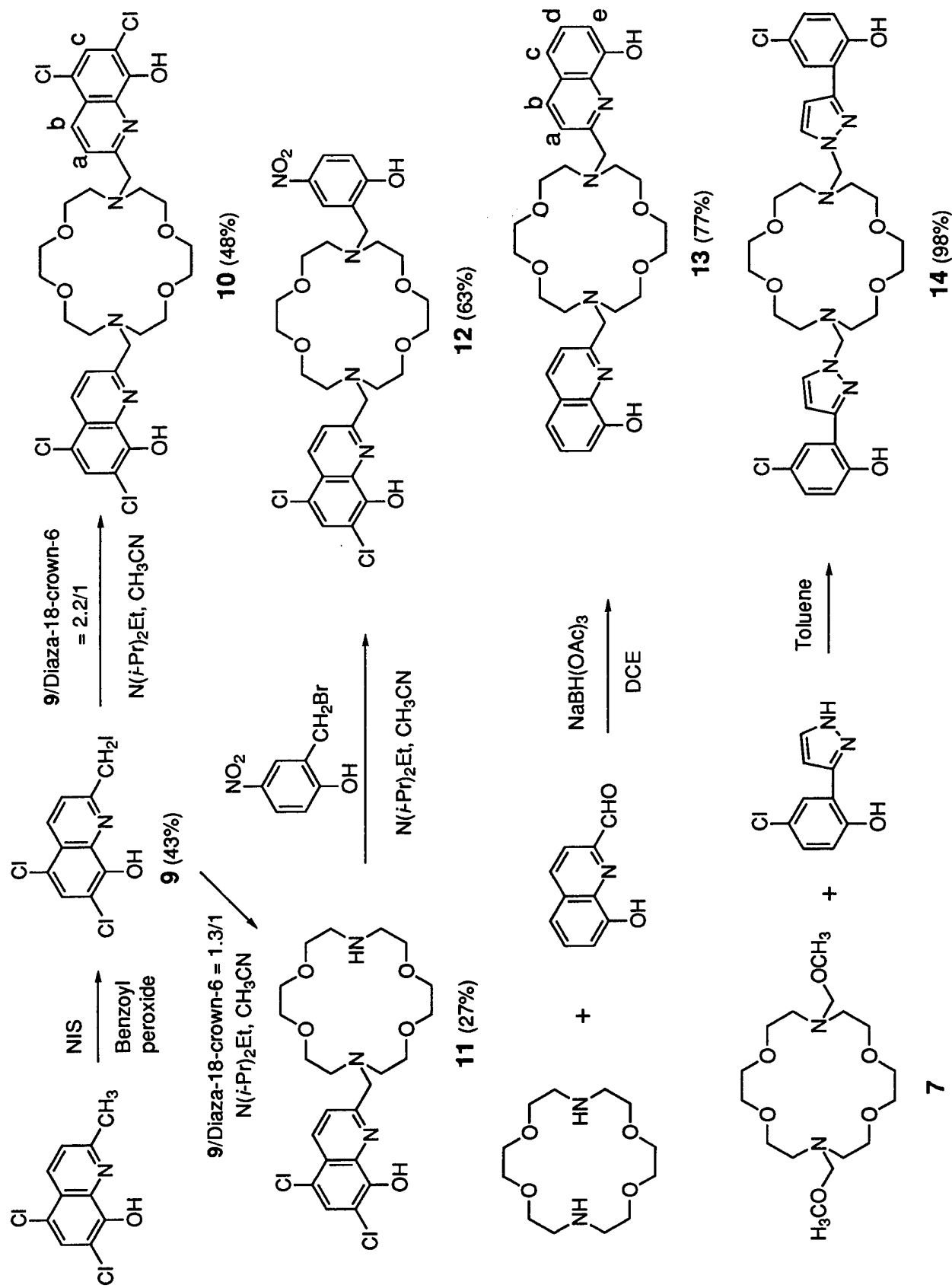


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Figure 1. 5-Chloro-8-hydroxyquinoline (CHQ)-substituted Diaza-18-crown-6 Ligands **1** and **2**



Scheme 1. Syntheses of CHQ-7-ylmethyl-substituted Analogues of **1** and Related Ligand **8**



Scheme 2. Efficient Syntheses of Analogues of CHQ-2-ylmethyl-substituted **2** and Related Ligand **14**